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EXAMINER	
BAIG, ADNAN	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/588,726	Applicant(s) HUNT ET AL.	
	Examiner ADNAN BAIG	Art Unit 2461	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 May 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *39,42-44,48-52 and 54-69* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *39,42-44,48-52 and 54-69* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 39 recites the limitation "*from said aggregated offered traffic rate*" in lines 13-14. There is insufficient antecedent basis for this limitation in the claim as the term “aggregated offered traffic rate" was not previously mentioned in the claim.

Claims 42-44, 48-52, 54-56 are further rejected as they depend from independent claim 39 rejected.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 39, 42-44, 48-52, and 54-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith (USP 5,878,224) in view of Ginzboorg USP (6,347,077), and further in view of Margulis et al. USP (6,243,449).

Regarding Claim 39, Smith discloses an adaptive overload control method for a communications network comprising a plurality of network access points and one or more network access controllers, wherein access to the communications network via the plurality of network access points is controlled by said one or more network access controllers, the method comprising:

offering traffic to a said network access controller (**see Fig. 4**) via a plurality of said network access points **(see Fig. 2, 206a-206b) & Col. 3 line 49 – Col. 4 lines 1-24 e.g., local distributions 206a-b initiates transactions to server 200 which include an overload controller for establishing a video session setup (e.g., traffic))**

said network access controller determining if an overload condition exists (**see Fig. 4, 410 & Col. 5 lines 4-10**)

the network access point generating global constraint information comprising a per-line gap interval and an estimate of the current rate per line at which traffic is admitted to the communications network, derived from said aggregate offered traffic rate (**see Col. 4 lines 18-24 e.g., admission factor based on aggregate offered traffic**) to restrict the rate at which traffic is admitted to the communications network via said plurality of network access points, (**see Col. 13 lines 6-36 e.g., the admission factor or the**

adapted gap interval can be calculated by the source (e.g., access point) or the server (e.g., controller). Furthermore the source (access point) calculates its new gap interval (e.g., per-line gap interval) based on its input transaction rate λ (e.g., estimate of current rate per line). See Col. 4 lines 61-67 e.g., aggregate offered traffic is determined by controller 500 for determining the reduction rate)

communicating said global constraint information to each of said plurality of network access points contributing to said aggregate traffic rate offered to the network access controller, (**see Col. 5 lines 4-36)**

(Referring to **Col. 5 lines 4-29**, Smith discloses the controller located in a network server establishes a target incoming workload by computing the offered load of sources (**e.g., aggregate offered traffic rate from plurality of access points**) from measurements of arriving messages.

and at each respective network access point which receives said global information responsive to said determination of said overload condition existing at the network access controller constraint **(see Col. 5 lines 4-10)**, processing the received global constraint information to generate a local call gap interval (Δt) dependent on the traffic rate (**see Col. 5 lines 4-15 e.g., reduce transaction rate based on traffic rate**

& Col. 5 lines 35-36, i.e., update (processing) & Col. 13 lines 5-15 e.g., generate a local call gap interval (Δt))

imposing subsequently one or more of said local call gap intervals (Δt) if said determined overload condition still exists at the network access controller, wherein each of the subsequent gap intervals is imposed by allowing a first call to be admitted and by then blocking all subsequent calls for the gap interval (Δt), (**see Fig. 1 & Col. 2 lines 7-15**)

While Smith discloses either an access point or controller located in a server is able to generate the global constraint information, Smith does not expressly disclose the access point generating the local call gap interval (Δt) dependent on the traffic rate and the number of lines over which said respective network access point receives traffic seeking access to the communications network. However the limitation would be rendered obvious in view of the teachings of Ginzboorg USP (6,347,077).

Referring to Fig. 4, Ginzboorg illustrates a gapping gate 40 (**e.g., network access point**), which generates call-gapping information based on the incoming traffic line (**e.g., number of lines is one**) of its input port, (**see Col. 5 lines 20-39 & Col. 6 lines

10-20 e.g., traffic measurements is applied to the inputs (e.g., number of lines) of all the gapping gates).

Ginzboorg further discloses generating call-gapping information by taking into consideration the average incoming traffic, (**e.g., estimate of current rate per line and number of lines being one**) and the maximum gapping parameter U (**e.g., traffic rate**), (**see Col. 1 lines 50-61 & Col. 5 lines 58-67**)

Ginzboorg further teaches that a user does not have the exact characteristics of the traffic which are unknown, which results in assigning traffic parameters values higher than actual prior to establishing a connection. The inaccurate description given by the user is compensated for by carrying out measurements from actual traffic where the utilization degree of the network resources can be improved, (**See Col. 1 lines 23-40**)

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention for the network access point as disclosed by Smith who discloses calculating the adapted gap interval in either the server or the source based on the estimated current rate line derived from the admission factor which is determined based on the aggregate offered traffic rate by sources, for generating the local call gap interval (Δt) dependent on the traffic rate and the number of lines over which said respective

network access point receives traffic seeking access to the communications network by implementing the teachings of Ginzboorg who discloses generating call-gapping information at a gapping gate dependant on an estimate of the current rate per line and the traffic rate, because the teaching lies in Ginzboorg that carrying out measurements from actual traffic makes the utilization degree of the network resources to be improved.

The combination of Smith in view of Ginzboorg do not expressly disclose determining an initial local gap interval ($\Delta t0$) for said respective network access point which varies randomly in length between zero and said determined local gap interval (Δt) and imposing said initial local gap interval ($\Delta t0$) at each of said plurality of network access points without waiting for traffic to be received at the respective network access point. However the limitation would be rendered obvious in view of the teachings of Margulis et al. USP (6,243,449).

Referring to Fig. 1, Margulis illustrates a switch 16 is able to apply an initial gap interval which varies in a random manner (***see Fig. 2B, step 130***) between the plurality of switches 16 offering traffic to a network processor 26, (**see Col. 5 line 47 – Col. 6 lines 1-24**)

Margulis discloses determining an initial local gap interval ($\Delta t0$) for said respective network access point which varies randomly in length between zero and said determined local gap interval (Δt), (**see Col. 5 lines 47-55**)

and imposing said initial local gap interval ($\Delta t0$) at each of said plurality of network access points without waiting for traffic to be received at the respective network access point. (**Referring to (Col. 6 lines 17-24), Margulis teaches by randomizing the first gap time in respect of a TN (terminating number) which is subject of gapping, network-wide call bursts at the end of each gap time are avoided (*i.e., avoid synchronized access attempts at the end of gapping period*). Furthermore the initial gap time is standard which is applied prior to receiving traffic for throttling the number of calls to the TN in order to avoid network congestion ,see Col. 5 lines 47-55**)

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention for implementing an initial local gap interval ($\Delta t0$) for said respective network access point which varies randomly in length between zero and said determined local gap interval (Δt), and imposing said initial local gap interval ($\Delta t0$) at each of said plurality of network access points without waiting for traffic to be received at the respective network access point as disclosed by Margulis within the teachings of Smith in view of Ginzboorg, because the teaching lies in Margulis that network-wide call bursts can be avoided at the end of each gap time by randomizing the initial gap interval.

Regarding Claim 42, the combination of Smith in view of Ginzboorg, and further in view of Margulis disclose a method as claimed in claim 39, wherein the network access controller analyzes the rate at which traffic is rejected by the network access controller to determine said at *least* one global traffic constraint, (**Smith. See Col. 4 lines 15-24)**

Regarding Claim 43, the combination of Smith in view of Ginzboorg, and further in view of Margulis disclose a method as claimed in claim 39, wherein the network access controller determines if an overload condition exists at the network access controller from a reject rate comprising a rate at which the traffic offered by all of said plurality of network access points to said network access controller is rejected, and wherein said at least one global constraint is derived from the reject rate, (**Smith**, **see Fig. 1, Col. 13 lines 5-9 & Col. 2 lines 7-15**)

Regarding Claim 44, the combination of Smith in view of Ginzboorg, and further in view of Margulis disclose a method as claimed in claim 39, wherein the controller determines said at least one global traffic constraint by analyzing the rate at which off-hook messages are rejected by the access controller, (**Smith, see Col. 7 lines 55-60**)

Regarding Claim 48, the combination of Smith in view of Ginzboorg, and further in view of Margulis disclose a method as claimed in claim 39, wherein in said step of communicating said one global constraint information to one or more of said plurality of network access points, said global constraint information is multicast to one or more of said plurality of network access points, (**Smith, see Col. 5 lines 29-36)**

Regarding Claim 49, the combination of Smith in view of Ginzboorg, and further in view of Margulis disclose a method as claimed in claim 39, wherein the initial gap interval (Δt0) (**Margulis, see Col. 5 lines 47-55**) is determined at each network access point using a random or pseudo-random technique. (**Smith, see Col. 12 line 64 – Col. 13 line 1-4**)

Regarding Claim 50, the combination of Smith in view of Ginzboorg and further in view of Margulis, disclose a method as claimed in claim 39, wherein the controller determines said at least one global traffic constraint by analyzing the rate at which off-hook messages are rejected by the access controller (**Smith, see Col. 7 lines 55-60**), wherein said communications network is a VoIP network, and said traffic comprises call-related traffic, (**Smith, see Col. 4 lines 7-40**)

Regarding Claim 51, the combination of Smith in view of Ginzboorg, and further in view of Margulis disclose a method as claimed in claim 39, wherein the controller determines said at least one global traffic constraint by analyzing the rate at which off-hook messages are rejected by the access controller and wherein said network access controller is a Media Gateway Controller and each of said plurality of network access points comprises a Media Gateway, (**Smith, see Col. 4 lines 15-24)**)

Regarding Claim 52, the combination of Smith in view of Ginzboorg, and further in view of Margulis disclose a method as claimed in any claim 39, wherein a global traffic rate constraint is determined by said network access controller for an address, (**Margulis, see Col. 3 lines 45-64 each TN contains an address)**

Regarding Claim 54, the combination of Smith in view of Ginzboorg, and further in view of Margulis disclose a method as claimed in claim 39, wherein a dial-plan is implemented by a network access point to make it unnecessary to send an off-hook condition message to the network access controller when a local gap interval (Δt), constraint is being imposed. (**Smith, see Col. 4 lines 25-40**)

Regarding Claim 55, the combination of Smith in view of Ginzboorg, and further in view of Margulis disclose a method as claimed in claim 39, wherein each network access

point determines the initial gap interval (Δt0), using a probabilistic method, (**Margulis, see Col. 6 lines 15-25**)

Regarding Claim 56, the combination of Smith in view of Ginzboorg, and further in view of Margulis disclose a method as claimed in claim 39, wherein the initial gap interval (Δt0), if not zero, is determined by each network access point such that all of the network access points' initial gap intervals (Δt0), are uniformly distributed in the range from zero to the local gap interval (Δt), determined by each network access point, (**Margulis, see Col. 5 lines 47-55**)

Regarding Claim 57, Smith discloses a method of controlling the number of calls received by a media gateway controller for admittance to a communications network, the media gateway controller being arranged to be connected to a plurality of media gateways, wherein traffic is admitted to the communications network via said media gateways under the control of said media gateway controller, the method comprising:

determining at least one scalable call rate control parameter at the media gateway controller, (**see Fig. 6, Col. 5 lines 4-15 & Col. 4 lines 15-24**)

the at least one scalable call rate control parameter comprising a per-line gap interval and an estimate of the current traffic rate per line at which traffic is admitted to the communications network derived from the current aggregate rate (**see Col. 4 lines 18-24 e.g., admission factor based on aggregate offered traffic**) at which traffic is offered to the media gateway controller, (**see Col. 13 lines 6-36 e.g., the admission factor or the adapted gap interval can be calculated by the source (e.g., access point) or the server (e.g., controller). Furthermore using the admission factor the source (access point) calculates its new gap interval (e.g., per-line gap interval) based on its input transaction rate λ (e.g., estimate of current rate per line). See Col. 4 lines 61-67 e.g., aggregate offered traffic is determined by controller 500 for determining the reduction rate)**

the media gateway controller multicasting the scalable rate control parameters to each media gateway within the domain of control of the media gateway controller, (**see Fig. 2, Col. 4 lines 15-24 & Col. 5 lines 29-36)**

at each respective media gateway, receiving said scalable rate control parameters (**see Col. 5 lines 29-36**)

scaling the call rate control parameter to determine a scaled call rate control parameter at the respective media gateway, (**see Col. 5 lines 35-36**), wherein the scaled call rate control parameter comprises a call gap interval (Δt), to be imposed by the respective media gateway on calls seeking admittance to the communications network (**see Fig. 1, Col. 13 lines 5-9 & Col. 2 lines 7-15**)

wherein the call gap interval (Δt), is dependent on the traffic rate over which said respective media gateway receives traffic seeking admittance to the communications network (**see Col. 5 lines 4-15 e.g., reduce transaction rate based on traffic rate & Col. 5 lines 35-36, i.e., update (processing) & Col. 13 lines 5-15 e.g., generate a local call gap interval (Δt)**)

imposing subsequently one or more of said local gap intervals (Δt)wherein each of the subsequent gap intervals is imposed by allowing a first call to be admitted and by then blocking all subsequent calls for the gap interval (Δt), (**see Fig. 1 & Col. 2 lines 7-15**)

While Smith discloses either a media gateway or media gateway controller located in a server is able to generate the scalable call rate control parameter, Smith does not expressly disclose the media gateway generating the local call gap interval (Δt) dependent on the traffic rate and the number of lines over which said respective media

gateway receives traffic seeking admittance to the communications network. However the limitation would be rendered obvious in view of the teachings of Ginzboorg USP (6,347,077).

Referring to Fig. 4, Ginzboorg illustrates a gapping gate 40 (**e.g., network access point**), which generates call-gapping information based on the incoming traffic line (**e.g., number of lines is one**) of its input port, (**see Col. 5 lines 20-39 & Col. 6 lines 10-20 e.g., traffic measurements is applied to the inputs (e.g., number of lines) of all the gapping gates**).

Ginzboorg further discloses generating call-gapping information by taking into consideration the average incoming traffic, (**e.g., estimate of current rate per line and number of lines being one**) and the maximum gapping parameter U (**e.g., traffic rate**), (**see Col. 1 lines 50-61 & Col. 5 lines 58-67**)

Ginzboorg further teaches that a user does not have the exact characteristics of the traffic which are unknown, which results in assigning traffic parameters values higher than actual prior to establishing a connection. The inaccurate description given by the user is compensated for by carrying out measurements from actual traffic where the utilization degree of the network resources can be improved, (**See Col. 1 lines 23-40**)

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention for the media gateway as disclosed by Smith who discloses calculating the adapted gap interval in either the server or the source based on the estimated current rate line derived from the admission factor which is determined based on the aggregate offered traffic rate by sources, for generating the local call gap interval (Δt) dependent on the traffic rate and the number of lines over which said respective network access point receives traffic seeking access to the communications network by implementing the teachings of Ginzboorg who discloses generating call-gapping information at a gapping gate dependant on an estimate of the current rate per line and the traffic rate, because the teaching lies in Ginzboorg that carrying out measurements from actual traffic makes the utilization degree of the network resources to be improved.

The combination of Smith in view of Ginzboorg do not expressly disclose imposing a predetermined initial local gap interval ($\Delta t0$) having a time duration varying randomly between zero and the time duration of local gap interval (Δt) without waiting for a call to be received at the respective media gateway. However the limitation would be rendered obvious in view of the teachings of Margulis et al. USP (6,243,449).

Referring to Fig. 1, Margulis illustrates a switch 16 is able to apply an initial gap interval which varies in a random manner (***see Fig. 2B, step 130***) between the plurality of

switches 16 offering traffic to a network processor 26, (**see Col. 5 line 47 – Col. 6 lines 1-24**)

Margulis discloses determining an initial local gap interval ($\Delta t0$) for said respective network access point which varies randomly in length between zero and said determined local gap interval (Δt), (**see Col. 5 lines 47-55**)

imposing a predetermined initial local call gap interval ($\Delta t0$) having a time duration varying randomly between zero and the time duration of the local call gap interval (Δt) without waiting for a call to be received at the respective media gateway, (**Referring to (Col. 6 lines 17-24), Margulis teaches by randomizing the first gap time in respect of a TN (terminating number) which is subject of gapping, network-wide call bursts at the end of each gap time are avoided (*i.e., avoid synchronized access attempts at the end of gapping period*). Furthermore the initial gap time is standard which is applied prior to receiving traffic for throttling the number of calls to the TN in order to avoid network congestion, see Col. 5 lines 47-55**)

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention for imposing a predetermined initial local gap interval ($\Delta t0$) having a time duration varying randomly between zero and the time duration of local gap interval (Δt) without waiting for a call to be received at the respective media gateway as disclosed by

Margulis within the teachings of Smith in view of Ginzboorg, because the teaching lies in Margulis that network-wide call bursts can be avoided at the end of each gap time by randomizing the initial gap interval.

Regarding Claim 58, the combination of Smith in view of Ginzboorg, and further in view of Margulis disclose a method as claimed in claim 57, wherein the initial local gap interval ($\Delta t0$) is initially active for a finite sub-set of said plurality of media gateways. (**Margulis, see Col. 5 lines 47-55**)

Regarding Claim 59, the combination of Smith in view of Ginzboorg, and further in view of Margulis disclose the a method as claimed in claim 57, wherein the initial gap interval ($\Delta t0$) (**see Col. 5 lines 52-58**) is determined using a random or pseudo-random technique. (**Smith, see Col. 12 line 64 – Col. 13 line 1-4**).

Regarding Claim 60, the combination of Smith in view of Ginzboorg, and further in view of Margulis disclose a method as claimed in claim 57, wherein at least one of said scalable call rate control parameters is assigned to a predetermined called address, (**Margulis, see Col. 3 lines 45-64 each TN contains an address)**

Regarding Claim 61, the combination of Smith in view of Ginzboorg, and further in view of Margulis disclose a method as claimed in claim 57, wherein a dial-plan is imposed by the media gateway controller on the media gateway to determine the control treatment applied to at least part of a called address, (**Smith, see Col. 4 lines 25-40**)

Regarding Claim 62, the combination of Smith in view of Ginzboorg, and further in view of Margulis disclose a method as claimed in claim 57, wherein the media gateway analyzes at least a portion of the called address prior to sending any call related indication to the media gateway controller. (**Smith, see Col. 4 lines 15-24 i.e., media gateways of Fig. 2, 206a, 206b contain new transactions for processing must analyze the called address**)

Regarding Claim 63 the combination of Smith in view of Ginzboorg, and further in view of Margulis disclose a method as claimed in claim 57, wherein the media gateway does not send an off-hook signal to the media gateway controller until the media gateway has analyzed at least one digit of the called address, (**Smith, see Col. 4 lines 15-24 i.e., media gateways of Fig. 2, 206a, 206b contain new transactions for processing must analyze the called address**)

Regarding Claim 64, the combination of Smith in view of Ginzboorg, and further in view of Margulis disclose a method as claimed in claim 57, wherein the media gateway controller sends a dial-plan to the media gateway in advance of the media gateway receiving a call from a user, (**Smith, see Col. 4 lines 25-40**)

Regarding Claim 65, the combination of Smith in view of Ginzboorg, and further in view of Margulis disclose a method as claimed in claim 57, wherein the media gateway controller indicates to the media gateway which dial-tone the media gateway should apply to the next call for a specific termination. (**Smith, see Fig. 1 & Col. 4 lines 25-40**)

Regarding Claim 66, the combination of Smith in view of Ginzboorg and further in view of Margulis disclose a method as claimed in claim 57, wherein the call gap interval (Δt) is imposed by the media gateway after the media gateway has analyzed the specific called address, (**Smith, see Col. 4 lines 15-24 i.e., media gateways of Fig. 2, 206a, 206b contain new transactions for processing must analyze the called address**)

Regarding Claim 67, Smith discloses an adaptive overload control system for a communications network, said system comprising:

A plurality of network access points **(see Fig. 2, 206a-206b & Col. 3 line 49 – Col. 4 lines 1-24)**

One or more network access controllers (**see Fig. 4 & Col. 3 line 49 – Col. 4 lines 1-24**)

wherein each of said network access controllers (**Fig. 4**) is arranged to control a plurality of said network access points to provide traffic with access to said communications network, (**Col. 3 line 49 – Col. 4 lines 1-24 e.g., local distributions 206a-b initiates transactions to server 200 which include an overload controller for establishing a video session setup (e.g., traffic))**

wherein the network access controller is arranged to control the amount of traffic admitted to the communications network via said network access points which it processes by (**see Col. 4 lines 15-2**4)

regulating the rate of traffic offered by said plurality of network access points to the network access controller by generating at least one global constraint to restrict the rate at which a network access point admits said traffic to the communications network, **(see Col. 5 lines 29-36)**

wherein said at least one global constraint information comprising a per-line gap interval and an estimate of the current rate per line at which traffic is admitted to the communications network, derived from the current aggregate rate **(see Col. 4 lines 18-**

24 e.g., admission factor based on aggregate offered traffic) at which traffic is offered to the network access controller by the network access points, (**see Col. 13 lines 6-36 e.g., the admission factor or the adapted gap interval can be calculated by the source (e.g., access point) or the server (e.g., controller). Furthermore the source (access point) calculates its new gap interval (e.g., per-line gap interval) based on its input transaction rate λ (e.g., estimate of current rate per line). See Col. 4 lines 61-67 e.g., aggregate offered traffic is determined by controller 500 for determining the reduction rate)**

wherein the network access controller if further arranged to communicate said at least one global traffic constraint to one or more of said plurality of network access points, **(see Col. 5 lines 4-36)**

(Referring to **Col. 5 lines 4-29**, Smith discloses the controller located in a network server establishes a target incoming workload by computing the offered load of sources (**e.g., aggregate offered traffic rate from plurality of access points**) from measurements of arriving messages.

wherein each respective one of said plurality of network access points which receives said at least one global traffic constraint is arranged to process the received global

traffic constraint to determine a plurality of local constraint conditions by (**see Col. 5 lines 35-36, i.e., update (processing)**)

determining a local gap interval (Δt) to be imposed on said traffic by said respective network access point, said local gap interval (Δt) being dependent on the rate of traffic received by said network access points (**see Col. 5 lines 4-15 e.g., reduce transaction rate based on traffic rate & Col. 5 lines 35-36, i.e., update (processing) & Col. 13 lines 5-15 e.g., generate a local call gap interval (Δt)**)

imposing subsequently one or more of said local call gap intervals (Δt) if said determined overload condition still exists at the network access controller, wherein each of the subsequent gap intervals is imposed by the respective network access point allowing a first call to be admitted to the communications network and then by then blocking all subsequent calls for the gap interval (Δt), (**see Fig. 1 & Col. 2 lines 7-15**)

While Smith discloses either an access point or controller located in a server is able to generate the global constraint information, Smith does not expressly disclose the access point generating the local call gap interval (Δt) dependent on the traffic rate and the number of lines over which said respective network access point receives traffic

seeking access to the communications network. However the limitation would be rendered obvious in view of the teachings of Ginzboorg USP (6,347,077).

Referring to Fig. 4, Ginzboorg illustrates a gapping gate 40 (**e.g., network access point**), which generates call-gapping information based on the incoming traffic line (**e.g., number of lines is one**) of its input port, (**see Col. 5 lines 20-39 & Col. 6 lines 10-20 e.g., traffic measurements is applied to the inputs (e.g., number of lines) of all the gapping gates**).

Ginzboorg further discloses generating call-gapping information by taking into consideration the average incoming traffic, (**e.g., estimate of current rate per line and number of lines being one**) and the maximum gapping parameter U (**e.g., traffic rate**), (**see Col. 1 lines 50-61 & Col. 5 lines 58-67**)

Ginzboorg further teaches that a user does not have the exact characteristics of the traffic which are unknown, which results in assigning traffic parameters values higher than actual prior to establishing a connection. The inaccurate description given by the user is compensated for by carrying out measurements from actual traffic where the utilization degree of the network resources can be improved, (**See Col. 1 lines 23-40**)

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention for the network access point as disclosed by Smith who discloses calculating the adapted gap interval in either the server or the source based on the estimated current rate line derived from the admission factor which is determined based on the aggregate offered traffic rate by sources, for generating the local call gap interval (Δt) dependent on the traffic rate and the number of lines over which said respective network access point receives traffic seeking access to the communications network by implementing the teachings of Ginzboorg who discloses generating call-gapping information at a gapping gate dependant on an estimate of the current rate per line and the traffic rate, because the teaching lies in Ginzboorg that carrying out measurements from actual traffic makes the utilization degree of the network resources to be improved.

The combination of Smith in view of Ginzboorg do not expressly disclose determining an initial local gap interval ($\Delta t0$) for said respective network access point which varies randomly in length from zero and said determined local gap interval (Δt) of the respective network access point and imposing said initial local gap interval ($\Delta t0$) without waiting for traffic to be received at the respective network access point. However the limitation would be rendered obvious in view of the teachings of Margulis et al. USP (6,243,449).

Referring to Fig. 1, Margulis illustrates a switch 16 is able to apply an initial gap interval which varies in a random manner (***see Fig. 2B, step 130***) between the plurality of switches 16 offering traffic to a network processor 26, (**see Col. 5 line 47 – Col. 6 lines 1-24**)

Margulis discloses determining an initial local gap interval (Δt0) for said respective network access point which varies randomly in length between zero and said determined local gap interval (Δt), (**see Col. 5 lines 47-55**)

and imposing said initial local gap interval (Δt0) at each of said plurality of network access points without waiting for traffic to be received at the respective network access point. (**Referring to (Col. 6 lines 17-24), Margulis teaches by randomizing the first gap time in respect of a TN (terminating number) which is subject of gapping, network-wide call bursts at the end of each gap time are avoided (*i.e., avoid synchronized access attempts at the end of gapping period*). Furthermore the initial gap time is standard which is applied prior to receiving traffic for throttling the number of calls to the TN in order to avoid network congestion, see Col. 5 lines 47-55**)

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention for determining an initial local gap interval (Δt0) for said respective network

access point which varies randomly in length between zero and said determined local gap interval (Δt), and imposing said initial local gap interval ($\Delta t0$) at each of said plurality of network access points without waiting for traffic to be received at the respective network access point as disclosed by Margulis within the teachings of Smith in view of Ginzboorg, because the teaching lies in Margulis that network-wide call bursts can be avoided at the end of each gap time by randomizing the initial gap interval.

Regarding Claim 68, the combination of Smith in view of Ginzboorg, and further in view of Margulis discloses an adaptive overload control system as in claim 67, including a network access controller arranged to received traffic offered by a plurality of network access points arranged to provide said traffic with access to a communications network, the network access controller further comprising:

a traffic monitor (**Smith, see Fig. 404**), for monitoring the aggregate offered traffic rate comprising the traffic offered by all of said plurality of network access points to said network access controller, (**Smith, see Col. 5 lines 15-20**)

of local constraint conditions by:

a processor arranged to determine from said aggregate traffic rate if an overload condition exists at the network access controller, (**Smith, see Fig. 4 & Col. 4 line 40-67**)

a processor arranged to generating at least one constraint derived from said monitored aggregate offered traffic rate; (**Smith, see Col. 5 lines 35-36, i.e., update (processing)**)

communication means to communicate said at least one constraint to each of said plurality of network access points, (**Smith**, **see Col. 5 lines 29-36)**

Regarding Claim 69, the combination of Smith in view of Ginzboorg, and further in view of Margulis discloses an adaptive overload control system as in claim 67, including a network access point arranged to provide a network access controller with an offered traffic rate, and further comprising:

a receiver arranged to received constraint information from the network access controller, (**Smith**, **see Col. 5 lines 29-36 i.e., communicates to source (receives))**

a processor arranged to process said received constraint information to determine one or more local constraints to be imposed on the traffic which limit the traffic offered by said network access point to the network access controller, (**Smith, see Col. 5 lines 35-36, i.e., update (processing)**)

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ADNAN BAIG whose telephone number is (571) 270-7511. The examiner can normally be reached on Mon-Fri 7:30m-5:00pm eastern Every other Fri off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ADNAN BAIG/
Examiner, Art Unit 2461
/Huy D Vu/
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